

Appl. No. 09/844,533  
Response to Office Action mailed October 10, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

Claims 1 to 17. (canceled)

Claim 18. (currently amended) An underwater immersion block for rearing algae and water living creatures produced by a method comprising the steps of:

(a) preparing a granular ~~iron and steel making slag mixture~~, said steel making slag mixture has a basicity in terms of a weight ratio of CaO to SiO<sub>2</sub> of 1.5 or higher; and

(b) producing a carbonate by carbonation of the mixture to agglomerate the mixture by using the carbonate as a binder, wherein the underwater immersion block has a porosity of 10 to 70%.

Claim 19. (currently amended) A method of producing an underwater immersion block for rearing algae and water living creatures, comprising the steps of:

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(a) preparing a granular ~~iron and~~ steel making slag mixture, said steel making slag mixture has a basicity in terms of a weight ratio of CaO to SiO<sub>2</sub> of 1.5 or higher;

(b) forming a packed bed of the mixture, the packed bed having a bulk specific gravity/true specific gravity ratio of 0.3 to 0.9; and

(c) carrying out a carbonation of the mixture in the packed bed to agglomerate the mixture.

Claim 20. (canceled)

Claim 21. (previously presented) The underwater immersion block according to claim 18, wherein the block is used for a sea-water immersion.

Claim 22. (previously presented) The underwater immersion block according to claim 18, wherein the block is used for a river immersion.

Claim 23. (previously presented) The underwater immersion block according to claim 18, wherein the mixture comprises granular slag containing CaO, and the carbonate is CaCO<sub>3</sub>.

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**Claim 24. (previously presented)** The underwater immersion block according to claim 18, wherein the mixture comprises granular slag containing CaO and MgO, and the carbonate includes  $\text{CaCO}_3$  and  $\text{MgCO}_3$ .

**Claim 25. (currently amended)** The underwater immersion block according to claim 18, wherein the granular ~~iron and~~ steel making slag mixture comprises a water-granulated blast furnace slag.

**Claim 26. (currently amended)** The underwater immersion block according to claim 18, wherein the granular ~~iron and~~ steel making slag mixture comprises granular slag subjected to a metallic iron removal treatment.

**Claim 27. (previously presented)** The underwater immersion block according to claim 18, wherein the mixture further comprises a granular additive.

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**Claim 28. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises oxidized iron.

**Claim 29. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises an oxidized iron-containing material.

**Claim 30. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises metallic iron.

**Claim 31. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises a metallic iron-containing material.

**Claim 32. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises a soluble silica.

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**Claim 33. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises a soluble silica-containing material.

**Claim 34. (previously presented)** The underwater immersion block according to claim 27, wherein the granular additive comprises CaO.

**Claim 35. (canceled)**

**Claim 36. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein forming the packed bed comprises forming a pile of the mixture.

**Claim 37. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein the block is used for a sea-water immersion.

**Claim 38. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein the block is used for a river immersion.

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**Claim 39. (currently amended)** The method of producing the underwater immersion block according to claim 19, wherein the granular iron and steel making slag mixture comprises a water-granulated blast furnace slag.

**Claim 40. (currently amended)** The method of producing the underwater immersion block according to claim 19, wherein the granular iron and steel making slag mixture comprises granular slag subjected to a metal removal treatment.

**Claim 41. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein the mixture further comprises a granular additive.

**Claim 42. (previously presented)** The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises an oxidized iron.

**Claim 43. (previously presented)** The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises an oxidized iron-containing material.

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Claim 44. (previously presented) The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises a metallic iron.

Claim 45. (previously presented) The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises a metallic iron-containing material.

Claim 46. (previously presented) The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises a soluble silica.

Claim 47. (previously presented) The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises a soluble silica-containing material.

Claim 48. (previously presented) The method of producing the underwater immersion block according to claim 41, wherein the granular additive comprises CaO.

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**Claim 49. (currently amended)** The method of producing the underwater immersion block according to claim 19, wherein the step of preparing the mixture comprises mixing (i) the granular iron and steel making slag, and (ii) at least one compound selected from the group consisting of  $\text{CaO}$ ,  $\text{Ca(OH)}_2$ ,  $\text{MgO}$  and  $\text{Mg(OH)}_2$ .

**Claim 50. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein the step of preparing the mixture comprises adjusting a moisture content of the mixture to a degree of a water content value so that an agglomerate formed after the carbonation has a maximum compressive strength.

**Claim 51. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein the step of agglomerating the mixture comprises blowing a gas containing carbon dioxide into the mixture in the packed bed.

**Claim 52. (previously presented)** The method of producing the underwater immersion block according to claim 19, wherein the



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step of agglomerating the mixture comprises placing the mixture in the packed bed in a gas atmosphere containing carbon dioxide.

**Claim 53. (previously presented)** The method of producing the underwater immersion block according to claim 52, wherein the carbon dioxide comprises carbon dioxide which is blown into water to saturate the water saturated with H<sub>2</sub>O.

**Claim 54. (canceled)**

**Claim 55. (previously presented)** The method of producing the underwater immersion block according to claim 19, further comprising breaking the resultant agglomerated mixture from step (c) into sizes of 80 to 1500 mm.

**Claim 56. (currently amended)** A method ~~to~~ for repairing a river bed comprising immersing a plurality of underwater immersion blocks according to claim 18 in a body of water which includes water creatures.

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Claim 57. (previously presented) The underwater immersion block according to claim 18, wherein the slag has a grain size of 5cm or smaller and an iron content of 3 weight % or more.

Claim 58. (previously presented) The underwater immersion block according to claim 18, which provides a pH of 10 or lower.

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